

FEB/FY06

ANNISTON ARMY DEPOT
Alabama

Army Defense Environmental
Restoration Program
Installation Action Plan

Final 31 July 2006

Table of Contents	1
Statement of Purpose	3
Acronyms	4
Site ID Conversions	7
 Installation Information	8
Cleanup Program Summary	10
 Installation Restoration Program (IRP)	12
Summary	13
Contamination Assessment	14
Previous Studies	24
IRP Active Sites	27
ANAD-01, Z-1 TRENCHES AREA	28
ANAD-07, CHEMICAL WASTE DISPOSAL PIT	29
ANAD-09, CALCIUM HPOCHLORIDE BURIAL PIT	30
ANAD-12, FACILITY 414 OLD LAGOONS	31
ANAD-13, ACID CHEMICAL WASTE PIT	32
ANAD-29, OLD LUMBER DISPOSAL YARD	33
ANAD-30, NORTHEAST LAGOON AREA	34
ANAD-31, BUILDING 114 METAL PLATING SHOP	35
ANAD-05, SINKHOLE	36
ANAD-08, ACID DISPOSAL PIT	37
ANAD-10, TNT WASHOUT FACILITY SEDIMENTATION TANK	38
ANAD-11, TNT LEACHING BEDS	39
ANAD-27, SOUTH TNT BURIAL PIT	40
ANAD-35, DEACTIVATION FURNACE	41
ANAD-46, BUILDING 6 UST	42
ANAD-48, WESTERN INDUSTRIAL AREA GROUND WATER	43
IRP No Further Action Sites Summary	44
 IRP Schedule	46
IRP Costs	49
 MILITARY MUNITIONS RESPONSE PROGRAM (MMRP)	51
Summary	52
Contamination Assessment	53
Previous Studies	54
 MMRP Active Sites	55
ANAD-001-R-01, RECOILESS RIFLE RANGE	56
ANAD-002-R-01, PISTOL RANGE	57
ANAD-003-R-01, BURNING GROUND BUFFER AREA	58
MMRP No Further Action Sites Summary	NA

Table of Contents

<i>MMRP Schedule</i>	59
<i>MMRP Costs</i>	61
<i>Community Involvement</i>	62

Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multi-year Cleanup Program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern, and proposes a comprehensive, installation-wide approach, with associated costs and schedules, to conduct investigations and necessary remedial actions.

In an effort to coordinate planning information between the restoration manager, US Army Environmental Center (USAEC), Anniston Army Depot, executing agencies, and regulatory agencies, an IAP was completed. The IAP is used to track requirements, schedules and tentative budgets for all Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change. Under current project funding, all remedies will be in place at the ANAD by the end of 2008.

The following persons contributed to the formulation and completion of this Installation Action Plan at the IAP Workshop held 8-9 February 2006:

Alabama Department of Environmental Management (ADEM)
Engineering and Environment, Inc. for USAEC
US Army Environmental Center (USAEC)
Alabama Department of Environmental Management (ADEM)
Anniston Army Depot (ANAD)
US EPA Region 4
Tank Automotive and Armament Command (TACOM) – Life Cycle Management
Command (LCMC)
CH2M HILL

Acronyms & Abbreviations

~	approximate
ADEM	Alabama Department of Environmental Management
AEC	(United States) Army Environmental Center
AEDB-R	Army Environmental Database - Restoration
AL	Alabama
ANAD	Anniston Army Depot
ARBCA	ADEM Alabama Risk-Based Correction Action for Underground Storage Tanks
ASA	Ammunition Storage Area
ATSDR	Agency for Toxic Substances and Disease Registry
AWWSB	Anniston Water Works & Sewer Board
BRAC	Base Realignment and Closure
CAP	Corrective Action Plan
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CHPPM	Center for Health Promotion and Preventive Medicine
COC	Contaminants of Concern
COE	(United States Army) Corps of Engineers
CRP	Community Relations Plan
CTC	Cost to Complete
CTT	Closed, Transferred, or Transferring
cy	cubic yards
DA	Department of Army
DCE	cis-1,2-Dichloroethene
DERA	Defense Environmental Restoration Account
DNAPL	Dense Non-Aqueous Phase Liquids
DoD	Department of Defense
DSERTS	Defense Site Environmental Restoration Tracking System (now AEDB-R)
EcoCOC	Ecological Contaminants of Concern
EPA	(United States) Environmental Protection Agency
ER,A	Environmental Restoration, Army (formally called DERA)
ERP	Emergency Response Plan
ESE	Environmental Science and Engineering, Inc.
ESI	Expanded Site Inspection
FFA	Federal Facility Agreement
FS	Feasibility Study
ft	foot
ft ²	square feet
FY	Fiscal Year
gal	gallon
GEO	Groundwater Extraction Optimization
gpd	gallons per day
HRS	Hazard Ranking System
HSWA	Hazardous and Solid Waste Amendments
IAP	Installation Action Plan

Acronyms & Abbreviations

IRA	Interim Remedial Action
IROD	Interim Record of Decision
IRP	Installation Restoration Program
IWTP	Industrial Wastewater Treatment Plant
JEG	Jacob's Engineering Group
K	\$1,000
LTM	Long Term Management
MC	Munitions Constituents
MCL	Maximum Contaminant Level
MEC	Munitions and Explosives of Concern
mg/kg	milligrams per kilogram
MMRP	Military Munitions Response Program
MW	Monitoring Well
NA	Sodium
NAPL	Non-Aqueous Phase Liquid
NE	Not Evaluated
NFA	No Further Action
NIST	National Institute of Standards and Technology
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
OU	Operable Unit
PAH	Polynuclear Aromatic Hydrocarbons
PA	Preliminary Assessment
PCB	Polychlorinated biphenyls
PCP	Pentachlorophenol
PIRP	Public Involvement and Response Plan
POL	Petroleum, Oil & Lubricants
RA	Remedial Action
RA(O)	Remedial Action - Operation
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RDX	Cyclotrimethylenetrinitramine
REM	Removal
RFA	RCRA Facility Assessment
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RIP	Remedy in Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
SAIC	Science Application International Corporation
SARA	Superfund Amendments and Reauthorization Act
SI	Site Inspection

Acronyms & Abbreviations

SIA	Southeast Industrial Area
STP	Sewage Treatment Plant
SVOC	Semi-Volatile Organic Compounds
SWMU	Solid Waste Management Unit
TACOM LCMC	Tank Automotive and Armament Command Life Cycle Management Command
TAPP	Technical Assistance for Public Participation
TCE	Trichloroethylene
TI	Technical Impracticability
TNT	Trinitrotoluene
ug/l	microgram per liter
USAEHA	United States Army Environmental Hygiene Agency (replaced by USAEC)
USATHAMA	United States Army Toxic and Hazardous Material Agency (replaced by USAEC)
UST	Underground Storage Tank
VOC	Volatile Organic Compounds

Site ID Conversions

AEDB-R #	Operable Unit#	SWMU #	AEDB-R SITE NAME
ANAD-01	OU-1	1	Z-1 TRENCHES AREA
ANAD-02	OU-2	2	SANITARY LANDFILL
ANAD-03/04	OU-2	3 & 4	OLD AND NEW INDUSTRIAL WASTEWATER TREATMENT
ANAD-05	OU-3	5	SINKHOLE
ANAD-06	OU-2	6	VALVE DISPOSAL PIT
ANAD-07	OU-2	7	CHEMICAL WASTE BURIAL PIT
ANAD-08	OU-3	8	ACID DISPOSAL PIT
ANAD-09	OU-2	9	CALCIUM HYPOCHLORITE PIT
ANAD-10	OU-3	10	TNT WASHOUT FACILITY SEDIMENTATION TANK
ANAD-11	OU-3	11	TNT LEACHING BEDS
ANAD-12	OU-2	12	FACILITY 414 OLD LAGOONS
ANAD-13	OU-2	13	SIA ACID CHEMICAL WASTE PIT
ANAD-14	OU-3	14	LAUNDRY WASTE LEACHING FACILITY
ANAD-15	OU-3	15	PROPELLANT DISPOSAL FACILITY
ANAD-26	OU-3	26	NORTH TNT BURIAL PIT
ANAD-27	OU-3	27	SOUTH TNT BURIAL PIT
ANAD-29	OU-2	29	OLD LUMBER DISPOSAL YARD
ANAD-30	OU-2	30	NORTHEAST LAGOON AREA
ANAD-31	OU-2	31	BUILDING 114 METAL PLATING SHOP
ANAD-35	OU-3	35	DEACTIVATION FURNACE
ANAD-46	OU-5	46	BUILDING 6 UST
ANAD-48	OU-5	48	WESTERN INDUSTRIAL AREA GROUNDWATER

Installation Locale: Anniston Army Depot (ANAD) is located in Calhoun County in northeastern Alabama. The depot is 110 miles west of Atlanta, GA and 50 miles east of Birmingham, AL. The city of Anniston is located 10 miles east of the depot. ANAD is surrounded by a series of small communities clustered primarily along the southern and eastern boundaries of the depot and is bordered on the north by the Pelham Range portion of the Fort McClellan Military Reservation. The overall size of the depot is approximately 15,200 acres.

Installation Mission: Anniston Army Depot (ANAD) is the only Army depot capable of performing maintenance on both heavy and light-tracked combat vehicles and their components. The depot is designated as the Center of Technical Excellence for the M1 Abrams Tank and is the designated candidate depot for the repair of the M60, AVLB, M728 and M88 combat vehicles. ANAD has assumed responsibility for the Towed and self-propelled artillery as well as the M113 Family of Vehicles.

Lead Organization:

Army Materiel Command (AMC)

Lead Executing Agencies:

Investigation Phase: US Army Corps of Engineers, Mobile District

Remedial Action Phase: US Army Corps of Engineers, Mobile District

Regulatory Participation:

Federal: U.S. Environmental Protection Agency (EPA), Region IV, Atlanta, Georgia, Federal Facilities Branch

State: Alabama Department of Environmental Management (ADEM), Montgomery, Alabama, Government Hazardous Waste Section, Hazardous Waste Branch, Land Division

National Priority List (NPL) STATUS: NPL installation (Southeast Industrial Area) with an installation-wide Federal Facility Agreement

- Partnering with regulators since April 1997
- RCRA, NPDES and Title V Operating Permits

Projected Dates for Construction Completion: 2007

Projected Date for NPL Removal: 2037

Installation Restoration Advisory Board (RAB)/Technical Review Committee

(TRC)/Technical Assistance for Public Participation (TAPP) STATUS: A RAB was started at Anniston Army Depot in May 1998.

Installation Program Summaries

IRP

Contaminants of Concern: Metals, SVOC's, VOC's

Affected Media of Concern: Soil, Groundwater

Estimated date for RIP/RC: 200709

Funding to Date: (thru FY05): \$60,398,000

FY06 funding: \$2,569,000

Future Requirements (FY07+):\$ 25,383,000

MMRP

Primary Contaminants of Concern: Explosives, Propellants

Affected Media of Concern: Soil

Estimated date for RIP/RC: 2014

Funding to Date: \$464,960

Cost-to-Complete: \$3,254,000

Base Realignment and Closure (BRAC)

There are no BRAC sites

Cleanup Program Summary

Installation Historic Activity: The roughly square-shaped configuration of ANAD encompasses 15,200 acres. Ammunition storage bunkers within the Ammunition Storage Area (ASA) occupy the majority of the depot. The Southeast Industrial Area (SIA) contains the depot's industrial facilities. Additional areas, primarily along the depot's southern boundary, are allocated for warehouse storage, fuel storage, administrative services, housing, and recreation. ANAD is one of the major employers in the Anniston area. Approximately 2650 Department of Army (DA) civilians are currently employed by ANAD. In addition to these employees, approximately 600 tenant employees, 900 contractors, and 4 military personnel are located at ANAD. Land use around ANAD is primarily rural, residential, cropland/pasture, and mixed forest.

The US Army began operations at the depot in 1941. Since then, the depot mission has included the storage of munitions and the refurbishment, testing, and decommissioning of combat vehicles and various types of ordnance.

The initial mission for the depot was defined as munitions storage. Construction operations for the depot were formally initiated on 17 February 1941, and the first ammunition storage magazines were completed on 03 October 1941. During World War II, the mission of the depot was expanded to include a combat equipment storage area, where over 1,230,000 tons of equipment was handled.

Over the years, ANAD's mission was further expanded to include the following: overhauling and repairing of ordnance vehicles; fire control and small arms rebuild (gained from the Augusta Arsenal which was closed in 1954); modification of M48A1 tanks and M67 flame throwers; calibration support for the southeastern states; and logistics support for the Lance missile, TOW systems, and the Dragon missile. The bulk of this work was conducted in the SIA.

The present mission of ANAD includes maintaining combat vehicles such as the M-1 Abrams tank, M-60 and M-113 series, as well as towed and self-propelled artillery. It also includes the storage and demilitarization of conventional munitions and storage of chemical surety materials/munitions.

ANAD's mission has required the use of a variety of industrial processes, such as plating, painting, degreasing, sand blasting, paint stripping, steam cleaning, etc. The various activities at ANAD since 1941 contributed to the contaminants of concern (COC). The most wide-spread COCs are industrial wastes, including spent solvents, heavy metals and petroleum/oil/lubricants, as well as explosive contamination.

Construction of a large chemical weapons destruction facility was completed in 2003. It is located in the north-central portion of the ASA. The duration of operation is expected to be approximately seven years.

Because of a Hazard Ranking Score (HRS) of 51.91, the Environmental Protection Agency (EPA) placed the ANAD SIA on the National Priorities List (NPL) on 31 March 31 1989. A Federal Facility Agreement (FFA) between the EPA Region IV, the Alabama Department of Environmental Management (ADEM) and the Department of Army was signed into effect

Cleanup Program Summary

for ANAD on 13 June 1990. The FFA identifies 44 Solid Waste Management Units (SWMUs) within ANAD, 15 in the ASA and 29 in the SIA.

Four additional SWMUs were added making the total 48 which have not been added to the FFA. Three additional sites are underground storage tank sites for which ADEM issued Notices of Violation (NOVs) under their UST regulations. The fourth site (ANAD-48) incorporates the Western Industrial Area Groundwater. The FFA integrates the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Superfund Amendments and Reauthorization Act (SARA) requirements for the entire depot. The scope of the FFA requires the Army to conduct a remedial investigation/feasibility study (RI/FS) for all applicable SWMUs within ANAD, followed up by the development and implementation of remedial design (RD) and remedial action (RA). The ASA is not on the NPL, but is addressed in the FFA.

ANAD discharges wastewater under a National Pollutant Discharge Elimination System (NPDES) Permit that was originally granted in 1986 and last renewed in 2002. The NPDES permit includes discharges from an Industrial Wastewater Treatment Plant, a Sewage Treatment Plant, and two Groundwater Treatment Units. A RCRA Permit was issued to ANAD in 1997.

A partnering team was formed at ANAD in April 1997. This team includes representatives from ANAD, U.S. Army Corps of Engineers, AEC, ADEM, EPA and Army contractors. This is not a legally binding relationship, but a commitment and an agreement among the parties to work together as a team to achieve mutually beneficial goals.

In FY05, SWMUs addressed under the IRP were grouped into five Operable Units (OUs). Previous to FY05 there were three OUs at ANAD, which did not include all SWMUs in the IRP. The current OU designations are: the SIA Groundwater OU (OU-1); the SIA Soils OU (OU-2); the Ammunition Storage Area (ASA) OU (OU-3); the Military Munitions Response Program (MMRP) OU (OU-4); and the Western Industrial Area OU (OU-5). See *Conversion Table on page 9*.

ANAD implemented remedial action which includes soil excavation, capping, and land use controls associated with the Ammunition Storage Area and Soils Operable Units.

IRP:

SI – OU-5 underway

RI/FS – OU-1 underway

Remedial Design/Remedial Action (RD/RA) - 12 sites complete

ANAD is conducting a Site Investigation to assess the presence of TCE. ANAD has initiated a Site Investigation to assess the presence of TCE in the Western Industrial Area (OU-5).

ANAD is currently evaluating remedial alternatives and the possible application of a Technical Impracticability Waiver for the groundwater operable unit (OU-1) as part of the Feasibility Study.

MMRP: SI - 3 sites complete

BRAC: There are no BRAC sites.

Anniston Army Depot

Installation Restoration Program

Total AEDB-R IRP Sites/AEDB-R Sites with Response Complete: 48/26

Different Site Types:

3	Burn Areas
6	Landfills
3	Oil Water Separators
5	Surface Impoundments/Lagoons
5	Underground Storage Tanks
2	Explosive Ordnance Disposal Area
2	Contaminated Ground Water
1	Contaminated Building
7	Disposal Pits/Dry Wells
5	Storage Areas
1	Above Ground Storage Tank
6	Waste Treatment Plants
2	Contaminated Sediments

Most Widespread Contaminants of Concern: Solvents, Metals

Media of Concern: Groundwater, Soil

Completed Removal (REM)/Interim Remedial Action (IRA)/Remedial Action (RA):

IRA-FY84	Source Removal at the following sites: ANAD-01, 02, 12, 22, 25, and 31
IRA-FY90+	Groundwater Treatment Bldg. 114 at ANAD-31
IRA-FY93	Source Removal at IWTP ANAD-03, ANAD-04
IRA-FY94	Source Removal at ANAD-12
IRA-FY96-98	Source Removal at ANAD-12
IRA-FY01	Groundwater Treatment at sites 1, 12 and 25
IRA-FY01+	Centralized Groundwater Treatment (OU-1)
RA-FY05	Soil Removal at ANAD-09, ANAD-12
RA-FY05	Soil Removal at ANAD-35

Total IRP Funding:

Prior Year Funding (through FY05)	\$ 60,357K
Current Year Funding (FY06)	\$ 2,569K
Future Funding Requirements (FY07+)	\$ 25,383K
Total	\$ 88,309K

Duration of IRP:

Year of IRP Inception:	1978
Year of IRP RIP/RC:	2007/2014
Year of IRP Completion including Long-Term Management:	2037

IRP Contamination Assessment

ANAD has a total of 48 Army Environmental Database - Restoration (AEDB-R) sites including lagoons, storage areas, disposal pits, underground storage tanks, landfills, open burning/open detonation areas and waste treatment areas.

A number of studies have been conducted at ANAD to support the Installation Restoration Program as well as other environmental management programs. These studies, which are listed herein, have yielded a significant amount of information on the extent of contamination on-depot and the potential for contamination off-depot.

A comprehensive groundwater RI that assesses the nature and extent of groundwater contamination in the area of ANAD's southeast boundary and the extent and potential for migration of contaminants from the SIA, particularly in the deeper groundwater regime is being finalized. The current study is filling data needs involving the nature of geologic formations, groundwater flow, and groundwater chemistry in the area up gradient of the SIA, the connectivity of the deep groundwater system in the SIA to off post springs, the connectivity of the shallow-to-deeper groundwater system, as well as the degree of attenuation and degradation, of contaminants. The results of this study will be used to establish the objectives and extent of groundwater cleanup required. The objectives and extent of groundwater cleanup will be detailed in a Feasibility Study that is currently underway.

ANAD's monitoring program includes the sampling of wells within and down gradient of the SIA. Locations off post of ANAD are monitored for VOC groundwater contamination. TCE is the most frequently detected VOC and is the primary contaminant of concern. The off post locations are monitored in accordance with requirements of ANAD's Federal Facility Agreement with EPA Region 4 and ADEM and CERCLA. Anniston Water Works and Sewer Board (AWWSB) and ANAD also analyze samples from Coldwater Spring monthly, which is more frequent than the required quarterly sampling specified in the Safe Drinking Water Act and ADEM Regulations.

There are a total of 123 wells and springs used by residents for drinking water, agriculture use, or recreational uses along the southern and western boundaries of ANAD. Wells and springs identified as the sole source drinking water supply have been sampled annually since 2000. The results of the sampling indicated that there were no VOC contaminants detected above MCLs.

Measures are in place to protect current and potential receptors (on and off post) from exposure to contaminants exceeding MCLs. These measures include cleanup of sites where contamination is present, operation of the interim groundwater treatment system at ANAD and an Emergency Response Plan (ERP), which will be implemented in the event that private or public water supplies exceed applicable drinking water standards. Due to increases in TCE concentration in some off-post monitoring wells and at Coldwater Spring, the 1996 ERP was revised. As a result, the Army funded \$1.6 million for additional treatment at the AWWSB's Krebs Water Treatment Plant. Since the installation of the air strippers at the Plant, TCE is at non-detect levels in the finished drinking water.

Sites within ANAD were identified where use restrictions and controls were selected as part of the remedy to address risk and exposure to contaminants and to manage the current and future use of the property. These elements of the remedy are identified in Draft RODs for the Soil SIA OU (OU-2) and the ASA OU (OU-3).

Prior to 1978, USAEHA installed a number of wells to monitor groundwater around the landfill area, the IWTP and the IWTP lagoons. It was determined from the monitoring data that the wastewater from the IWTP lagoons was not degrading groundwater quality. At the same time, it was found that wastes from the landfill area had contaminated the groundwater.

U.S. Army Toxic and Hazardous Materials Agency (USATHMA) (now the US Army Environmental Center) completed an installation assessment of ANAD in April 1978. The assessment was designed to document potential on-depot sources of contamination and the potential for contaminant migration beyond the depot boundaries.

In September 1979, the ANAD through the U.S. Army Corps of Engineers (COE), Mobile District, contracted with Environmental Science and Engineering, Inc. (ESE) to investigate solid and hazardous waste disposal facilities at ANAD. The purpose of the investigation was to determine the potential for contamination of groundwater, surface water, and soil, and to recommend ways to restore the sites into compliance with state and Federal regulations. The sites included the Z-1 Trenches Area (AEDB-R site designation number ANAD-01), the Z-2 Sanitary Landfill (ANAD-02), and the Abrasive Dust Landfill (ANAD-21). Analyses of groundwater monitoring well samples indicated on-post groundwater contamination at the Z-1 Trenches Area.

In 1980, USAEHA conducted a study to further evaluate contaminant impact of on-post groundwater conditions through the analysis of samples from 22 on-depot wells. All 22 wells showed traces of trichloroethene (TCE) (also known as trichloroethylene); the three wells closest to Z-1 Trenches Area also showed methylene chloride. In February 1981, 12 of the wells were re-sampled and analyzed for volatile organics. In addition to the confirmed TCE and methylene chloride, a wide variety of volatile chlorinated hydrocarbons were detected at concentrations exceeding existing human health criteria.

In February 1981, as a result of the previous groundwater studies, USATHMA initiated a survey and assessment of ANAD to determine the extent of contaminant migration and to develop plans for abatement or treatment. The program included a geotechnical evaluation of the SIA and the installation and testing of 41 monitoring wells.

In August 1982, Weston, a DA contractor, initiated a RCRA Corrective Action, which involved the excavation, transportation, and disposal of contaminated waste sludge and soil from the Z-1 Trenches Area, Facility 414 (ANAD-12) and the Building 130 Sump (ANAD-25). From November 1982 through May 1983, a total of 62,000 tons of contaminated sludge and soil were removed and transported to a RCRA-permitted

hazardous waste landfill in Emelle, AL. Following confirmatory sampling in the excavation sites, the areas were backfilled, graded, and vegetated.

In 1983, as a result of previous on-depot studies, USATHAMA determined that additional efforts were necessary to identify the sources of contaminants, their rate of migration and potential impact. This work was performed by Battelle's Hazardous Waste Management Office and included the installation of 25 groundwater monitoring wells at 24 locations within the vicinity of the SIA. In addition, three large-diameter wells were installed with five adjacent pilot borings to evaluate the extraction and treatment of groundwater at designated on-depot locations. Battelle concluded that some contaminants were crossing ANAD's boundary and, while their concentrations were low enough to pose no immediate hazard, potential long-range impacts might require remedial action.

From 1984 to 1987, Weston performed several studies of on-depot groundwater contamination and designed a groundwater treatment system for the groundwater collected from beneath Building 114 Metal Plating Shop (ANAD-31). The USACE installed the system. Weston also developed a conceptual design for an SIA-wide groundwater extraction and treatment system.

In 1985-1986, ESE, a DA contractor, performed an investigation to determine the potential for off-depot contamination, with an emphasis on the determination of contaminant migration pathways and transport rates. Thirteen off-depot monitoring wells were installed and sampled. Samples were also collected from nearby Coldwater Spring, the primary drinking water source for Calhoun County. The study concluded that contamination found in Coldwater Spring and some of the off-depot wells did not appear to be directly correlated to on-depot contamination.

In 1987, a RCRA Facility Assessment (RFA) was conducted to evaluate the release of hazardous waste or hazardous constituents. The RFA identified 38 SWMUs and evaluated the potential for contaminant release from each of these SWMUs to the environment. The report discussed each identified SWMU in terms of site description, waste characteristics, migration pathways and evidence of release.

Also in 1987, ESE performed an Endangerment Assessment concerning the potential risk to human health and the environment posed by contaminant releases from ANAD. In 1987, ESE produced a supplemental report to this assessment. The supplement provided additional information required for the Agency for Toxic Substances and Disease Registry (ATSDR).

In June 1987, Bionetics Corporation, a DA contractor, performed a photogeologic study in order to identify potential contaminant pathways leading from ANAD to Coldwater Spring.

The study concluded that contaminated groundwater from ANAD could enter the confined aquifer along the Jacksonville Fault and reemerge at Coldwater Spring. In 1989, ESE performed an ANAD RI/FS. This study presented a comprehensive overview of the past and present contaminant releases and remediation activities for ANAD. Information

compiled included a summary of generated wastes, SWMU descriptions, a summary of on-depot soil boring data, a history of groundwater chemistry data for the SIA, a summary of preliminary results of off-depot investigations and the off-depot endangerment assessment.

In 1989, E.C. Jordan, a DA contractor, developed a Groundwater Extraction Optimization (GEO) program for the ANAD SIA. The program included the design of a groundwater extraction and treatment system for each of the three areas of defined groundwater contamination at the SIA (the Trench Area which includes ANAD-01; the Northeast Area which includes ANAD-07, 25, 30 and 31; and the Landfill Area which includes ANAD-12 and 22). The objectives of the program were to capture highly contaminated groundwater near the source and provide additional downgradient contaminant capture to approximately the 25-50 µg/l iso-concentration contour for trichloroethene/dichloroethene. Installation of the groundwater extraction and treatment systems was completed by the USACE in September 1990. The systems included groundwater extraction wells, air strippers for volatile organics and activated carbon filters for the absorption of phenolics. The treated groundwater was discharged to Dry Creek but is now discharged to Choccolocco Creek in accordance with the Depot NPDES Permit. In September 1991, an Interim Record of Decision (IROD) was issued for the extraction and treatment systems in the three SIA areas and for the Building 114 system. The IROD refers to the systems as the SIA Groundwater Operable Unit (OU).

After the signing of the FFA in 1990, ANAD began pursuing the investigations in 2 basic study areas: the SIA, which contains the National Priorities List (NPL) site; and the ASA, which is not on the NPL. The SIA was broken into three operable units: the Soils OU, the On-post Groundwater OU, and the Off-post OU. The Off-post OU was to include all groundwater that may be affected by contamination in the SIA. In 2005, the OU designations were changed and the SIA was divided into two OUs. The on-post groundwater OU & the off-post OU were combined into one comprehensive OU, OU-1. The SIA soils OU remained a distinct OU and is now referred to as OU-2.

SOUTHEAST INDUSTRIAL AREA

SOILS AND THE FORMER ONPOST GROUNDWATER OPERABLE UNITS

In 1991, Jacob's Engineering Group (JEG), a DA contractor, initiated a RI/FS in the SIA (29 SWMUs total) for the soils and on post groundwater operable units. The RI/FS was performed in accordance with the requirements of the National Contingency Plan, as required for Superfund sites. The RI report was approved by EPA/ADEM in January 1995. This study indicated that contamination was found in all media at the SIA: surface soil, subsurface soil, sediment, surface water and groundwater. Contaminants are primarily organics, inorganics, pesticides and polychlorinated biphenyls (PCBs). A total of 59 organic compounds and 19 inorganic analytes were measured in groundwater. Halogenated aliphatic hydrocarbons represent the greatest percentage of the organic results. Potential contaminants were detected in wells both on- and off-site.

JEG also performed a Groundwater Extraction Optimization (GEO) Study in conjunction with the SIA RI/FS that they began in 1991. The purpose of the GEO study was to evaluate operation of the existing groundwater extraction and treatment systems. The GEO Study report was finalized in November 1994. Due to equipment malfunctions and an overall lack of monitoring equipment on the systems, additional renovation/upgrade of the groundwater extraction and treatment systems was necessary in order to complete the GEO Study as planned. Plans for this renovation were prepared by the USACE and implemented in FY95. Even after renovation the current extraction system had problems with fouling due to mineralization and bacteria. USACE conducted a Pilot Chemical Processing Study for Extraction System in FY96. The findings of this study were used to develop a long-term solution for groundwater treatment and extraction. A prototype large diameter well was installed in the landfill area in FY96 as part of the groundwater extraction system optimization. This well was designed to eliminate operational problems caused by fouling due to bacteria and mineralization.

Due to extensive EPA/ADEM comments to the draft RI/FS in the SIA, an addendum to the RI/FS work plans was prepared. This addendum was approved by EPA/ADEM in September 1994, and a Phase 2 RI/FS was initiated that same month. The Phase 2 RI investigation included both the soil and groundwater OUs. Fieldwork for Phase 2 RI/FS was conducted by Science Application International Corporation (SAIC), a DA contractor, and was completed in June 1996.

The Phase 2 RI was finalized in May 1998. Results from this study indicate that environmental media, including groundwater, surface water, soil, and sediment has been affected to various degrees by previous activities at ANAD. Groundwater was evaluated only under the residential land use scenario. The groundwater investigation was divided into 4 Sub-Basins: the Industrial Area, the Trench Area, the Northeast Area and the Landfill Area. There is massive contamination, especially by chlorinated hydrocarbons, in localized areas of these Sub-Basins, and there is a presence of dense non-aqueous phase liquids (DNAPLs) in the bedrock and residuum groundwater. The ANAD boundary was selected as the point of compliance. The 12 contaminants of concern at the boundary are aluminum, arsenic, beryllium, chromium, iron, lead, manganese, bis(2-ethylhexyl)phthalate, carbon tetrachloride, chloroform, methylene chloride, and TCE. An IROD for groundwater is awaiting signature; it calls for enhancement for the existing groundwater treatment, along with hot spot treatment. Design of the new groundwater treatment system began in 1999, and operations began in August 2001. The new system addresses recommendations in the Five-Year Review of the existing groundwater treatment system, which is under an IROD.

An ecological risk assessment identified zinc as one ecological risk chemical of concern (ecoCOC) at one site (ANAD-44). In sediment, cadmium, lead, and 11 polycyclic aromatic hydrocarbon compounds were identified as ecoCOCs at ANAD-44. In soil, five metals (cadmium, chromium, lead, antimony, and zinc) were identified as ecoCOCs at six SWMUs. The Feasibility Study for groundwater was approved as final in January 1999. A Feasibility Study for soil was approved in July 1999. The Final ROD for soils is awaiting signature; it is anticipated to call for excavation and capping of some sites.

A sewer line video inspection of the Industrial Wastewater Treatment plant sewer lines was conducted as part of the SIA RI. Leakage and infiltration estimates as well as recommendations for repairs are documented in the Industrial Sewer Line Upgrade Plan that was finalized in FY97. Repairs began in October 1998 and were completed in 1999. JEG performed additional soil/sludge sampling in the Facility 414 Old Lagoons (ANAD-12) in January 1994. The report of the findings of this additional sampling was finalized in November 1994. As a result of this additional sampling, a source (sludge) removal action was initiated in the lagoons in FY96. Delineation efforts performed in FY96 showed that the contamination source was approximately 10 times the original estimate of the 1994 JEG report. The soil contamination is considered a source of groundwater contamination. A cost effective, in-situ action was sought. A performance demonstration was conducted in early FY97 using an innovative technology where a ferrous ion solution, a 50% hydrogen peroxide mixture and a proprietary catalyst, was injected to chemically oxidize the contamination. Based on the results of the performance demonstration, a full-scale source removal action began in July 1997. Fieldwork using this process was completed in fall 1999. In 2001, a final report describing the activities and results of this action was completed. The technology was a success except for 1800 cubic yards that remains above the clean-up goals.

COMPREHENSIVE SIA GROUNDWATER OPERABLE UNIT INVESTIGATION

Sites associated with this OU are the SIA sites that contribute to groundwater contamination that have the potential to impact Coldwater Spring and other off post groundwater receptors.

JEG initiated a Dye Tracing Study in 1994 to gain an understanding of the direction and distance of contaminated groundwater flow from beneath the SIA. During this study, dye was traced rapidly in a multidirectional pattern from the Trench, Northeast and Landfill Areas to various off-depot locations, including Coldwater Spring.

SAIC conducted quarterly monitoring in 1995 at locations identified as having a hydrological connection to ANAD's contaminated areas according to the 1994 Dye Tracing Study. TCE is the only identified compound that exceeded its associated MCL at two locations. Neither of these locations was used for drinking water purposes. TCE was also detected below the drinking water standards at Coldwater Spring. SAIC drafted an emergency response plan in October 1996 that addresses interim measures that would need to be implemented to provide safe drinking water to the off-post residents in the vicinity of ANAD if contamination is detected above drinking water standards in a drinking water supply.

A more quantitative dye trace study was conducted by SAIC beginning in 1996 due to concerns that the 1994 dye study had not adequately considered background levels of dye in the aquifer. Dye was injected in January 1997 and area springs and wells were monitored for 1 year without any dye being detected off post. A final report was submitted to EPA/ADEM in May 1998. The 1998 report contained different conclusions than the 1994 dye study. The 1998 report indicates that no dye was detected off post and the ANAD SIA lacks the features common to karst settings that allow rapid multidirectional

flow. The findings of the 1998 dye study report will be part of a RI/FS for the off post OU. SAIC continued to monitor approximately 40 off post springs and wells after the completion of the initial study. Dye was detected off post in 2 locations in the fall of 1998, one location 6 miles southeast and one location 5 miles due west. The location 5 miles west is a private drinking water well. The private well and other adjacent wells were sampled for VOCs, but none of the wells contained any of those compounds. SAIC continued to monitor the 40 off post springs and wells through August 1999. The final report of the Groundwater Tracer Test Extended Monitoring Report was completed in April 2000.

An off-post groundwater sample was also collected from a well at Cooper Catfish Lakes on 59 Murphree Lake Road in Sept 1999. The sample was analyzed for VOCs to monitor any changes in these compounds since the well was first sampled in 1995. The results from this sample indicated elevated levels of TCE and cis-1,2-Dichloroethene (DCE). The concentration of TCE is 109 ppb and DCE is 155 ppb. Based on these sample results, it was determined that confirmatory sampling of the well and sampling of the ponds, which were being filled from the well, needed to be conducted. On 26 October 26 1999, samples were collected by the Army from the well and ponds. Sample results from this event confirmed the elevated TCE and DCE concentrations in the well. In addition, they showed levels of TCE above the drinking water standard in the first pond but below the standard in the fourth pond. This is attributed to water flowing sequentially from the well through the first pond to the last pond located at Highway 202. On 29 October 29 1999, the Army removed the spigot from the well and plugged the above ground pipe. The water from the well still flows to the ponds via underground pipes.

Based on these analytical results from the Cooper Catfish Lakes' well and pond, ANAD in cooperation with ADEM and EPA, developed a plan to conduct a door-to-door water well and spring inventory in the down gradient direction from the SIA. The inventory was conducted in two phases to determine the presence of all groundwater wells and springs in the area. The first phase included the area east of Turner Road, north of Coldwater School Road, west of Coldwater Road, north of 202 between Coldwater Road and Bynum-Leatherwood Road, and west of Bynum-Leatherwood Road until it intersects with Eulaton Gate Road. This area was determined based on the location of the Cooper property, the area of past VOCs detections in off-post monitoring wells, and the downgradient, structurally controlled groundwater direction. Thirteen wells on Turner Road that were sole sources of drinking for the property owners were sampled for VOCs. All analytes were below laboratory detection limits.

Phase II of the well and spring inventory began following the conclusion of Phase 1 with a survey to determine well and spring usage in the area south and west of the base. Fifty-seven residents were identified as having groundwater as their sole source of drinking water. The Army did not sample 4 of these homes, because one individual refused access, one individual could not be contacted, and two older individuals moved, leaving their homes unoccupied. All sample results were non detect for VOCs. EPA performed confirmatory sampling for VOCs at most of the residents (some did not want their well sampled again) in August 2000 with all being below detection limits for ANAD's VOCs of concern.

In August 2000, the original 14 off-post monitoring wells, the Cooper Catfish Lake's well, and the 4 new monitoring wells installed on Mr. Cooper's property were sampled for VOCs. The Catfish Lakes supply well remained at 110 ppb for TCE, and monitoring wells MW-8 and 99-X02-B02D on the property were below the drinking water standard of 5 ppb for TCE. VOCs were not detected in any of the other wells.

The Phase I Off-Post Remedial Investigation contract was awarded in May 1999. This contract performed the Jacksonville Fault Study, including geophysics, data integration of all previous work, and monitoring well installation. The final report was submitted to ADEM and EPA in December 2001.

In August 2001, 66 of the 67 private wells sampled in 2000 were re-sampled. One household sampled in 2000 no longer had anyone living on the property. All wells were below the detection limits for VOCs.

Phase II of the investigation was completed in April 2003. The investigation included surface geophysical surveys to locate deep monitoring well locations. Following the geophysical surveys, installation of numerous groundwater wells was completed; 12 shallow wells, to define the horizontal extent of the TCE plume, and 7 deep wells, sampling multiple discrete flow zones to define the vertical and horizontal extent of the TCE plume. One of the deep wells also serves as a down gradient trigger well.

The Draft Comprehensive Groundwater Remedial Investigation (RI) Phase III Report was submitted to the regulators in April 2005. The report presents a comprehensive summary of the remedial investigations completed in the SIA.

AMMUNITION STORAGE AREA (ASA) INVESTIGATION (OU-3)

JEG initiated an Expanded Site Inspection (ESI) in the ASA in 1991 (15 SWMUs total). The ESI report was approved by EPA/ADEM in December 1994. Contamination from VOCs and semi-volatile compounds (SVOCs) was determined not to be a problem at the ASA. Heavy metals, explosives, nitrate/nitrite, total organic carbon and petroleum hydrocarbons were detected in samples of groundwater, soil and sediment from a number of sites. Four SWMUs were determined to be no further action sites during the ESI. Further investigation to confirm and evaluate the potential contamination was recommended at eleven SWMUs. High concentrations of explosives were thought to be present in subsurface soils at ANAD-11.

SAIC initiated preparation of RI/FS work plans for the 11 remaining ASA SWMUs in September, 1993. The plans were finalized by EPA/ADEM in December 1994. A preliminary investigation was conducted at ANAD-11 due to unconfirmed reports that there were TNT levels in the soil at this site in excess of >60%. This preliminary investigation was conducted by the USACE in FY97 to confirm the high explosives levels in order to perform the investigation in a safe manner. (Note: Soil concentrations in excess of 10% are considered explosive). This investigation indicated that the concentrations were less than 10%.

SAIC began the ASA RI fieldwork in 1997 and completed it in 1998. A Draft RI report was delivered in May 1999. It was determined that an additional ecological risk assessment was needed to adequately characterize 9 of the sites, in accordance with EPA, Region 4 guidance. The Final ASA RI was delivered in August 2001. The Final Feasibility Study and Proposed Plan were delivered in March 2002. The Final ROD is awaiting signature.

UNDERGROUND STORAGE TANK INVESTIGATIONS

In July 1991, February 1992 and June 1993, ANAD received Notices of Violation (NOVs) from ADEM for underground storage tank (UST) releases. Three sites required Secondary Investigations due to leaking petroleum products. The tanks at these sites were removed. The SI for Building 385 conducted in FY95 determined that no further investigation or corrective actions were required. A Corrective Action Plan (CAP) was written for Building 410 and Building 6 in FY 96. These CAPs called for free product removal and natural attenuation for soil and groundwater. The free product removal began in FY96 for Building 410 and FY 97 for Building 6. Baseline soil and groundwater monitoring was conducted and quarterly monitoring began in FY 96 as required by the CAPs. Bi-annual monitoring continues. In 1999, development of alternate corrective actions was performed based on the new ADEM Alabama Risk-Based Correction Action (ARBCA) for Underground Storage Tanks guidance. The results of this action were completed in January 2002. In 2005, it was determined that concentrations in groundwater beneath Building 410 met the ARBCA levels and No Further Action was recommended for the site. Groundwater monitoring continues at Building 6.

WESTERN INDUSTRIAL AREA (OU-5)

Concentrations of TCE above the MCL were detected in groundwater within the Western Industrial Area (WIA). The source of the contaminants has not been identified. TCE was detected in groundwater while implementing other groundwater monitoring programs. A site investigation is underway to identify the potential source of the TCE and to determine if a Remedial Investigation is warranted.

IRP Cleanup Exit Strategy

A monitoring well inventory was conducted in FY96 by Vista Technologies and SAIC in order to locate, field verify construction specification and survey the over 300 monitoring wells that have been installed at ANAD for CERCLA, RCRA and UST investigations.

Recommendations for retaining, replacing, redeveloping, repairing or abandonment of the wells was provided in the Monitoring Well Inventory Well Assessment Report finalized in FY97. Recommendations were implemented and documented in the Monitoring Well Rehabilitation Report, USACE, dated September 1997.

A Public Involvement and Response Plan (PIRP) was drafted by JEG in 1991. This PIRP outlined efforts to include the public in the IRP. An update of this plan, the Community Relations Plan (CRP) Update, was initiated in FY97 by QST Environmental (formerly ESE)

IRP Contamination Assessment

to include environmental justice issues, as well as information concerning Restoration Advisory Boards (RABs) and Technical Assistance for Public Participation (TAPP). The CRP was finalized in May 1998. As an additional document to the CRP, a Community Involvement Plan (CIP) Addendum was prepared to reflect current community interest. The CIP was released to the public in 2004.

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Anniston Army Depot

Installation Restoration Program

Site Descriptions

ANAD-01

Site Z-1 Trenches Area

SITE DESCRIPTION

Operable Unit 1

In 2003 it was decided that all groundwater actions for OU 1 would be addressed under this site. The Comprehensive (formally 'Combined') Groundwater OU includes previously studied (on and off-post) groundwater OUs. The SWMUs that are considered source areas for groundwater contamination are ANAD-01, 12, 25, 29 and 30. Investigations have shown that chlorinated solvents have migrated off-post and impacted the municipal drinking water source (Coldwater Spring) for the Anniston/Calhoun County system (~60,000 people). Air strippers installed at the Water Treatment Plant began operation in FY05.

The Z-1 Trenches Area consisted of a series of seven excavated trenches approximately 10 to 15 feet in depth, located within a 2-acre area north of the vehicle test track. The waste pits were used from 1971 to 1981 for the disposal of various liquid and containerized chemical wastes. As the result of a 1979 RCRA Corrective/Removal Action, the trenches were excavated and contaminated soils and wastes were transported off-depot for disposal. Confirmatory soil sample analysis indicated a maximum concentration of 25 milligrams per kilogram (mg/kg) total organics remaining in the trenches after excavation. Based upon the soil analyses, ADEM granted approval for closure.

The Phase I RI shows that a 1983 removal action was successful in removing soil as a contaminant source. Contamination reached groundwater before the 1983 removal. A pump and treat system began operation in 1990 under an IROD. Groundwater samples taken in 1995 detected solvents at levels that indicated a high probability of NAPL.

CLEANUP STRATEGY

It is anticipated that the final ROD for the Comprehensive Groundwater OU will call for further enhancement of the groundwater treatment systems and will include consideration of a Technical Impracticability (TI) Waiver associated with MNA. A comprehensive RI/FS is underway and being finalized to complete the determination of the impact of onsite groundwater contamination to offsite human and ecological receptors.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: High

CONTAMINANTS OF CONCERN:
Metals, VOCs, SVOCs

MEDIA OF CONCERN:
Ground Water

Phases	Start	End
PA.....	197804	198608
SI.....	198608	198704
RI/FS	198110	200702
IRA	198211	200702
RD	200702	200704
RA(C)	200704	200709
RA(O)	200709	203709

RIP: 200709

RC: 203709

ANAD-07

CHEMICAL WASTE DISPOSAL PIT

SITE DESCRIPTION

Operable Unit 2

The Chemical Waste Disposal Pit is located in the northeast area of the SIA, across from Building 512. A variety of chemical wastes were reportedly dumped into a small pit in this area during a 6-month period in 1960. The exact location and dimensions of the pit are unknown. The area was also, reportedly, the site of three separate spills of paint stripper from a 1,000-gallon tank car. This site is included in the Southeast Industrial Area Groundwater and Soil Operable Units. The RI identifies lead at this site posing a human health risk (industrial use) for soils. The RI states that soil contamination does not provide a significant source for the groundwater contamination. Groundwater contamination is suspected to have resulted from reported bulk spills migrating to the groundwater. Part of the area has been capped with concrete for installation use (non-IRP funds).

STATUS

REGULATORY DRIVER: CERCLA

RRSE: High

CONTAMINANTS OF CONCERN:
VOCs, SVOCs, Lead

MEDIA OF CONCERN: Soil,
Groundwater

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200206
RD	200408	200508
RA(C)	200508	200509
LTM	200512	203506

RC: 200509

CLEANUP STRATEGY

The Soil ROD calls for soil removal (~10cy) and disposal. No additional remedial action is expected. Land use controls, which include capping and restrictions on excavation and groundwater use, will be implemented as part of the final remedy. Continue to monitor cover and signs. Groundwater monitoring will continue as required by the 1991 IROD.

ANAD-09

CALCIUM HYPOCHLORIDE BURIAL PIT

SITE DESCRIPTION

Operable Unit 2

The calcium hypochlorite pit was used in 1974 for the disposal of 400 containers of calcium hypochlorite, each containing approximately 100 pounds. The pit is located approximately 500 feet southwest of the vehicle test track, between the Facility 414 Old Lagoons (ANAD-12) and the A-Block Lagoon (ANAD-22). A USAEHA report noted that several containers had ruptured during burial and had caused a fire when the hypochlorite came into contact with scrap dunnage. The pit is currently covered with fill and heavily vegetated.

This site is included in the SIA Soils Operable Unit. The 1998 Phase II RI identifies lead contamination in soils posing a human health (industrial use) and ecological risk. The removal and capping was completed in FY05

The Soil ROD required excavation, transportation and disposal of ~100cy of soil and capping (~2,500ft²) of this site, all of which was completed in FY05.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: High

CONTAMINANTS OF CONCERN:
Lead

MEDIA OF CONCERN: Soil,
Groundwater

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200206
RD	200408	200508
RA(C)	200508	200509
LTM	200510	203112

RC: 200509

CLEANUP STRATEGY

Land use controls, which include excavation and groundwater use restrictions, will be implemented as part of the final remedy. Continue to monitor and repair the cover as needed.

ANAD-12 FACILITY 414 (OLD LAGOONS)

SITE DESCRIPTION

Operable Unit 2

The Facility 414 Old Lagoons consist of a series of three unlined industrial waste lagoons. These lagoons were used from approximately 1960 until 1978 for the storage of abrasive dust waste and a variety of concentrated liquid chemical wastes generated in the shop area. In August 1978, the lagoons were emptied by pumping the liquid wastes to the A-Block Lagoon (ANAD-22). Approximately 1,100 to 1,300 cy of sludge were removed from the lagoons and stockpiled on-site. The lagoons were then backfilled with clay. The waste sludge was removed for off-depot disposal along with the waste from the Z-1 Trenches Area (ANAD-01) as the result of a 1979 RCRA Corrective/ Removal Action. A pump and treat system began operations in 1990 to treat source areas.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: High

CONTAMINANTS OF CONCERN:
TCE, Lead, Calcium, Zinc

MEDIA OF CONCERN: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200206
IRA	198211	200308
RD	200408	200508
RA(C)	200508	200602
LTM	200606	203506

RC: 200602

A removal action was conducted (Fenton's reagent) for TCE-contaminated soil and groundwater. The process was effective in removal of VOC contaminants in soil, but ineffective for the groundwater. The objective of the removal actions was to treat or reduce chemical concentrations believed to be contributing to exceedance of the health-based concentrations limits in groundwater. The metals-contaminated soil at the site is considered an ecological risk, and some lead-contaminated soil poses a risk to the industrial worker. Groundwater samples taken in 2002 detected solvents at levels that indicated a high probability of NAPL.

Groundwater contamination associated with this site and all groundwater actions will be addressed under ANAD-01.

In accordance with the OU-2 ROD, in FY05, ~209cy soil were excavated from ANAD-09/12 and properly disposed. The area was capped with gravel. LUCs were implemented.

CLEANUP STRATEGY

LTM will consist of cap maintenance and periodic inspections.

ANAD-13

ACID CHEMICAL WASTE PIT

SITE DESCRIPTION

Operable Unit 2

The SIA Acid Chemical Waste Pit is located in a “sandy cut in a hillside” near the SIA Old Sewage Treatment Plant (STP). The pit was reportedly used for the disposal of “tank-truck quantities” of unspecified chemical wastes of unknown origin from either the late 1940s to the late 1960s or from 1957 to 1972. This site is included in the SIA Soils Operable Unit.

The 1998 Phase II RI shows that soil contamination at this site poses an unacceptable risk to industrial workers. This site is not considered to pose an ecological risk. There is no completed pathway to groundwater.

The Soils ROD is anticipated to require capping (2,168ft²) of this site. The soil removal design is expected to be completed in FY04. The soil removal was completed in FY05.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: High

CONTAMINANTS OF CONCERN:
Chemical Waste

MEDIA OF CONCERN: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200206
RD	200408	200508
RA(C)	200508	200512
LTM	200512	203506

RC: 200512

CLEANUP STRATEGY

Land use controls, which include excavation and groundwater use restrictions, will be implemented as part of the final remedy. Monitor and repair the cover as needed.

OLD LUMBER DISPOSAL YARD (NEAR BLDG 573)

SITE DESCRIPTION

Operable Unit 2

The Old Lumber Disposal Yard was located immediately south of the Eulaton gate of the SIA just north of what is now Building 513. It was used for both the disposal of wood by burning with waste oil and as a stockpile of wood available for the public. The area covered less than 1 acre and was in use from the mid-1940s through the mid-1970s. In 1997, the site was excavated (non-IRP) in order to construct a warehouse. Waste wood removed in the excavation was disposed of off-site. Most of the area is now covered with concrete and a metal structure.

In accordance with the OU 2 ROD, areas posing a human health risk were capped in late FY05. Land use controls were implemented as part of the final remedy.

CLEANUP STRATEGY

LTM will consist of cap maintenance and periodic inspections.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: High

CONTAMINANTS OF CONCERN:
VOCs, SVOCs, PCP, Lead

MEDIA OF CONCERN: Soil

Phases	Start	End
PA.....	197804	198608
SI.....	197804	198608
RI.....	198110	200308
RD	200408	200505
RA(C)	200506	200509
LTM	200510	203509

RC: 200509

ANAD-30 NORTHEAST LAGOON AREA

SITE DESCRIPTION

Operable Unit 2

The Northeast Lagoon Area was a site where various surface impoundments and liquid disposal pits were used for waste disposal until the early 1960s. It is an approximate 1-acre area located adjacent to Building 513 in the northeastern section of the SIA. It is believed that the Northeast Lagoon Area was used as a primary disposal area for chlorinated solvents from the early 1950s to the early 1960s. The area has since been filled in and is now used as a gravel parking lot. A pump and treat system began operations in 1990.

This site is included in the Southeast Industrial Area Soil Operable Unit.

The Phase II RI states that there are human health risks associated with lead in the soils and that the subsurface soil is not presently contributing to groundwater contamination. VOC contamination reached groundwater in the past and has persisted. Groundwater samples taken in 2002 detected solvents at levels that indicated a high probability of NAPL.

In accordance with the OU 2 ROD, areas posing a human health risk were capped in late FY05. Land use controls were implemented as part of the final remedy.

CLEANUP STRATEGY

LTM will consist of cap maintenance and periodic inspections.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: High

CONTAMINANTS OF CONCERN:
VOCs, SVOCs, Lead

MEDIA OF CONCERN: Soil

Phases	Start	End
PA	197804.....	198608
SI.....	197804.....	198608
RI.....	198110.....	200308
RD.....	200408.....	200508
RA(C)	200506.....	200509
LTM	200510.....	203509

RC: 200509

ANAD-31

METAL PLATING SHOP BUILDING 114

SITE DESCRIPTION

Operable Unit 2

Operations in Building 114 include cleaning, treating, and plating of metal. A French drain system surrounds the building and drains into an adjacent collection sump. The water (350,000gal/day) is collected and pumped to a treatment site. As a result of past activities, extensive chromium and volatile organic chemical (VOC) contamination in soil and groundwater has occurred in the vicinity of Building 114. Consequently, it is necessary to treat the sump water using an air stripping system (VOC removal) and granulated activated carbon to address the removal of hexavalent chromium. The air stripper was installed in 1990 as part of an IROD.

The surface soil is not a human health or ecological risk because the site is covered with pavement. The subsurface soil is not a significant source of groundwater contamination.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: Medium

CONTAMINANTS OF CONCERN:
Metals (chromium), VOCs

MEDIA OF CONCERN:
Groundwater

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200203
IRA	198304	200706
RA (C).....	200706.....	200707
RA(O)	200706	203112

RIP: 200706

RC: 203112

CLEANUP STRATEGY

It is anticipated that the ROD for the Groundwater OU will call for further enhancement of the groundwater treatment systems and will include consideration of a Technical Impracticability Waiver. Continue to operate the groundwater sump and air strippers with associated carbon vessels to treat groundwater from beneath the building.

ANAD-05

SINKHOLE (NEAR EASTERN BOUNDARY)

SITE DESCRIPTION

Operable Unit 3

This site is included in the Ammunition Storage Area (ASA) Operable Unit.

The “sinkhole” is located in a remote area along the ASA’s eastern boundary. This feature is a depression, approximately 0.6 acres in size and contains water. The area was used periodically between 1942 to 1978 for the disposal of various construction debris and miscellaneous wastes. Most of the debris has been removed from the sinkhole over the years. VOCs, SVOCs and lead have been detected in groundwater.

CLEANUP STRATEGY

Finalize the ASA OU ROD (expected in FY06).

One year of baseline samples have been collected and starting in FY06, groundwater samples will be collected annually for an additional nine years. Land use controls pertaining to groundwater use are included in the final remedy.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: Medium

CONTAMINANTS OF CONCERN:
Metals, VOCs, SVOCs

MEDIA OF CONCERN:
Groundwater

Phases	Start	End
PA	198704	198608
SI	197804	199410
RI/FS	199310	200206
RD	200408	200508
RA(C)	200508	200509
RA(O)	200509	201409

RIP: 200509

RC: 201409

ANAD-08 ACID DISPOSAL PIT

SITE DESCRIPTION

Operable Unit 3

The acid disposal pit is located in a chemical limited area, a highly restricted portion of the ammunition storage area. It is believed to have been used from 1959 to 1961 for the disposal of various chemicals, possibly in drums, before the Facility 414 Old Lagoons (ANAD-12) were constructed. The pit was of concrete construction and has been filled in with sand that was previously used for cleaning metal parts. Elevated levels of VOCs, SVOCs, metals and explosives were detected in the groundwater.

CLEANUP STRATEGY

Finalize the ASA OU ROD (expected in FY06). One year of baseline samples have been collected and starting in FY06, groundwater samples will be collected annually for an additional nine years. Land use controls pertaining to groundwater use are included in the final remedy.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: Low

CONTAMINANTS OF CONCERN:
VOCs, SVOCs, VOCs, Explosives

MEDIA OF CONCERN:
Groundwater

Phases	Start	End
PA	198704	198608
SI	197804	199410
RI/FS	199310	200206
RD	200408	200508
RA(C)	200508	200509
RA(O)	200509	201409

RIP: 200509

RC: 201409

TNT WASHOUT FACILITY SEDIMENTATION TANK

SITE DESCRIPTION

Operable Unit 3

The sedimentation tank is part of the TNT Washout Facility located in a restricted area of the central portion of the ASA. The facility consists of a large metal building (Building 172) and a wastewater sedimentation tank. The facility was used from 1948 until the mid 1950s for washing explosives from demilitarized munitions. The slurry from washout operations discharged from the building to the sedimentation tank. The overflow from this tank then discharged through a pipe under the road and into the TNT leaching beds (ANAD-11). The unit closed in the mid 1950s except for occasional use through the late 1960s. Metals and explosives were detected in the groundwater.

This site is included in the Ammunition Storage Area Operable Unit.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: Medium

CONTAMINANTS OF CONCERN:
TNT, RDX, Metals

MEDIA OF CONCERN:
Groundwater

Phases	Start	End
PA	197804	198608
SI	197804	199410
RI/FS	199310	200206
RD	200408	200504
RA(C)	200508	200509
RA(O)	200509	201409

RIP: 200509

RC: 201409

CLEANUP STRATEGY

Finalize the ASA OU ROD (expected in FY06). One year of baseline samples have been collected and starting in FY06, groundwater samples will be collected annually for an additional nine years. Land use controls pertaining to groundwater use are included in the final remedy.

ANAD-11 TNT LEACHING BEDS

SITE DESCRIPTION

Operable Unit 3

The TNT leaching beds are located across the road from ANAD-10. The overflow from the sedimentation tank of ANAD-10 discharged through a clay pipe into the leaching beds. The beds occupied an area of ~0.75 acres. From 1948 until the mid 1950s, the leaching beds treated explosives, washout wastewater. From the mid 1950s through the late 1960s, the beds were apparently used occasionally for disposal of wash water from pelletizing system filters. In April 1978, an unknown quantity of octol pink water was discharged to the beds. The beds have not been used since April 1978. In 1985, the area was graded and capped with 2 to 5 feet of native clay. Metals and explosives were detected in the groundwater.

This site is included in the Ammunition Storage Area Operable Unit.

CLEANUP STRATEGY

Finalize the ASA OU ROD (expected in FY06). One year of baseline samples have been collected and starting in FY06, groundwater samples will be collected annually for an additional nine years. Land use controls pertaining to groundwater use are included in the final remedy.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: Medium

CONTAMINANTS OF CONCERN:
TNT, RDX, Metals

MEDIA OF CONCERN:
Groundwater

Phases	Start	End
PA	197804	198608
SI	197804	199410
RI/FS	199310	200206
RD	200408	200508
RA(C)	200508	200509
RA(O)	200509	201409

RIP: 200509

RC: 201409

ANAD-27 SOUTH TNT BURIAL PIT

SITE DESCRIPTION

Operable Unit 3

Wastes containing TNT may have been buried in one small burial pit located in the north-central section of the depot near the installation boundary. The pit area is well vegetated and shows no evidence that a site even existed except for a few posted signs indicating a “closed landfill.”

Metals above risk based screening levels were detected in the groundwater. Low concentrations of metals, VOCs, and SVOCs were detected in subsurface soils below risk-based screening levels.

CLEANUP STRATEGY

Finalize the ASA OU ROD (expected in FY06).

One year of baseline samples have been collected and starting in FY06, groundwater samples will be collected annually for an additional nine years. Land use controls pertaining to groundwater use are included in the final remedy.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: Low

CONTAMINANTS OF CONCERN:
TNT

MEDIA OF CONCERN: Soil

Phases	Start	End
PA.....	197804	198608
SI.....	197804	199410
RI/FS	199310	200212
RD	200408	200508
RA(C)	200508	200509
RA (O)	200509	201409

RIP: 200509

RC: 201409

ANAD-35 DEACTIVATION FURNACE

SITE DESCRIPTION

Operable Unit 3

The deactivation furnace was located in the northwest corner of the ASA. The furnace was used to deactivate small munitions. Particulate emissions from the furnace were collected in a bag house where the dust was drummed and stored as a hazardous waste. A leaking, 1,000-gallon underground diesel fuel tank located adjacent to the furnace building was removed and the surrounding contaminated soils remediated. An air emission permit application was submitted to ADEM and then withdrawn. The site was never granted a RCRA permit or operated as a RCRA unit.

The equipment was removed in 1999 and the building received RCRA closure and was removed in 2000. The groundwater, surface and subsurface soils are being investigated as a CERCLA site. Lead in the surface soil posed a human health risk for the industrial worker.

Metals above risk-based screening levels were detected in the groundwater.

Soils posing a risk were excavated and disposed of properly in FY05.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: Medium

CONTAMINANTS: Metals

MEDIA OF CONCERN:
Soil, Groundwater

Phases	Start	End
PA	197804	198608
SI	197804	199410
RI/FS	199310	200206
RD	200408	200508
RA(C)	200508	200509
RA(O).....	200509.....	201409

RIP: 200509
RC: 201409

CLEANUP STRATEGY

Finalize the ASA OU ROD (expected in FY06). One year of baseline samples have been collected and starting in FY06, groundwater samples will be collected annually for an additional nine years. Land use controls pertaining to groundwater use are included in the final remedy.

ANAD-46

LEAKING USTS AT BUILDING 6

SITE DESCRIPTION

Operable Unit 5

Use of the multiple USTs at Building 6 was discontinued in the 1980s. The tanks were removed and a secondary investigation was completed in 1994.

A Corrective Action Plan (CAP) was submitted (1995) to ADEM. A draft Alabama Risk Based Corrective Action Assessment was submitted in 2002. A second phase of sampling was completed in 2003 and resubmitted to ADEM.

In FY05, the Alabama Risk Based Corrective Action process was completed to establish site-specific cleanup levels.

Note: Three 'new' USTs were installed at this site to be used as a service station.

CLEANUP STRATEGY

Monitored natural attenuation for groundwater is being implemented and will continue until cleanup standards have been met.

STATUS

REGULATORY DRIVER: RCRA

RRSE: High

CONTAMINANTS OF CONCERN:
BTEX

MEDIA OF CONCERN:
Groundwater

Phases	Start	End
ISC	199201	199301
INV	199301	199501
CAP	199501	199702
IMP(C)	199702	199702
IMP (O)	199702	202605

RIP: 199702

RC: 202605

WESTERN INDUSTRIAL AREA GROUND WATER

SITE DESCRIPTION

Operable Unit 5

The Western Industrial Area (WIA) contains the depot's support facilities to the industrial operation including equipment maintenance, rail service and automotive facilities. Additional areas are allocated for warehouse storage, fuel storage, administrative services, housing, and recreation. TCE was detected in concentrations above the MCL's during the investigation of leaking underground tanks (ANAD-46).

ANAD initiated a Site Investigation in FY05 to determine the source of the TCE.

CLEANUP STRATEGY

Complete the Site Investigation and evaluate the results. If required, an RI will be funded in FY06.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: Low

CONTAMINANTS OF CONCERN:
VOCs

MEDIA OF CONCERN:
Soil, Groundwater, Surface water,
Sediment

Phases	Start	End
PA	200402	200502
SI	200502	200606
RI/FS.....	200607	200707

RC: 200707

IRP No Further Action Sites Summary

AEDB-R#	Site Title	Operable Unit	Documentation/Reason for NFA	NFA Date
ANAD-02	SANITARY LANDFILL	#2	Other, Capped	200206
ANAD-03/04	OLD and NEW INDUSTRIAL WASTEWATER TREATMENT	#2	NFA Phase 1 RI	199501
ANAD-06	VALVE DISPOSAL PIT	#2	NFA Phase 1 RI	199501
ANAD-16	BURNING GROUND		Not eligible for ER,A, BRAC funding	199410
ANAD-17	DEMOLITION PIT		Not eligible for ER,A, BRAC funding	199410
ANAD-18	OLD SEWAGE TREATMENT PLANT	#5	NFA ASA RI	200108
ANAD-19/20	SIA OLD & NEW SEWAGE TREATMENT PLANT	#2	NFA Phase 1 RI	199501
ANAD-21	ABRASIVE DUST LANDFILL	#2	NFA Phase 1 RI	199501
ANAD-22	A-BLOCK LAGOON	#2	NFA Phase 1 RI	199501
ANAD-23	ASBESTOS WASTE DISPOSAL TRENCH	#2	NFA Phase 1 RI	199501
ANAD-24	OLD SANITARY LANDFILL	#2	NFA Phase 1 RI	199501
ANAD-25	BUILDING 130 SUMP	#2	NFA Phase 1 RI	200308
ANAD-28	WASTE WOOD LANDFILL	#2	NFA Phase 1 RI	199501
ANAD-32/33	HAZARDOUS WASTE STORAGE BLDG 512	#2	NFA Phase 1 RI	199501
ANAD-34	CHEMICAL STORAGE IGLOOS	#3	Not eligible for ER,A, BRAC funding	199410
ANAD-36	DRILL and TRANSFER SYSTEM SITE	#3	NFA ASA RI	200108
ANAD-37	VEHICLE WASH RACK	#5	NFA ASA RI	200108
ANAD-38	ABRASIVE DUST COLLECTORS	#2	NFA Phase 1 RI	199501
ANAD-39	DYNAMOMETER WASTEWATER TREATMENT SYSTEM	#2	NFA Phase 1 RI	199501
ANAD-40	OIL WATER SEPARATOR	#2	NFA Phase 1 RI	199501
ANAD-41	STEAM CLEANING BUILDINGS	#2	NFA Phase 1 RI	199501
ANAD-42	PAINT BOOTHS	#2	NFA Phase 1 RI	199501
ANAD-43	CYANIDE PRETREATMENT SYSTEM	#2	NFA Phase 1 RI	199501

AEDB-R#	Site Title	Operable Unit	Documentation/Reason for NFA	NFA Date
ANAD-44	DRY CREEK	#2	Partnering Team Agreement (Meeting minutes)	200408
ANAD-45	BUILDING 410	#2	ADEM Letter	200506
ANAD-47	LEAKING UST – BLDG 385	#5	Study Completed, No cleanup required	199603

Initiation of IRP: 1978

Past Phase Completion Milestones

- **1978**-IRP Installation Assessment
- **1984**-RCRA Subtitle C Corrective Action
- **1986**-Building 114 Groundwater Extraction and Treatment System Installation
- **1987**-RCRA Facility Assessment (RFA)
- **1989**-RI/FS (Non-NPL)
- **1989**-Groundwater Extraction System Installation
- **1989**-SIA NPL Listing
- **1990**-Federal Facility Agreement (FFA) Signed
- **1991**-GW Operable Unit Interim ROD signed
- **1992**-Building 114 Chromium Treatment Installation
- **1992**-SIA Groundwater Extraction Optimization Study
- **1992**-ASA Expanded Site Inspection (ESI)
- **1993**-Old IWTP Source Removal
- **1993**-Dye Tracing Study
- **1993**-Facility 414 Removal Action
- **1995**-SIA Phase 1 RI
- **1999**-Phase 2 RI/FS
- **1999**-Proposed Plan for On Post Groundwater OU
- **2000**-Proposed Plan for On Post Soil OU
- **2002**-Proposed Plan for Ammunition Storage Area

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates: ASA:
ROD, August 2006 and Soils ROD, December 2006

Projected Construction Completion Date of IRP:

- Completion Date of all RA(C) Activities: September 2007

Projected Date for Removal from NPL: 2037

Schedule for Next Five-Year Review: Unknown

Estimated Completion Date of IRP (including LTM phase): 2037

ANNISTON ARMY DEPOT IRP SCHEDULE

(Based on current funding constraints)

AEDB-R#	Phase	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
ANAD-01	RI/FS									
	IRA									
	RA(C)									
	RA(O)									
	RA(O)									203709
	RA(O)									203709
	RA(O)									203709
ANAD-05	RA(O)									
ANAD-07	LTM									203506
ANAD-08	RA(O)									
ANAD-09	LTM									203112
ANAD-10	RA(O)									
ANAD-11	RA(O)									
ANAD-12	LTM									203506
ANAD-13	LTM									203506
ANAD-27	RA(O)									
ANAD-29	LTM									203509
ANAD-30	LTM									203509
ANAD-31	IRA									
	RA(C)									
	RA(O)									203112
ANAD-35	RA(O)									
ANAD-46	IMP(O)									202605
ANAD-48	RI/FS									

Prior Years Funds

Total Funding up to FY04: \$58,281K

Year	Site Information		Expenditures	FY Total
FY05	ANAD-01	IRA	487.14	
	ANAD-01	RI	681.35	
	ANAD-02	LTM	18.00	
	ANAD-05	RD	3.00	
	ANAD-08	RD	13.00	
	ANAD-10	RD	9.87	
	ANAD-12	RD	3.00	
	ANAD-12	RAC	292.44	
	ANAD-27	RD	3.00	
	ANAD-31	IRA	133.31	
	ANAD-35	RD	4.51	
	ANAD-45	RAO	37.73	
	ANAD-46	RAO	48.74	
	ANAD-48	SI	300.46	
	RAB/TAPP		39.71	\$2,075.26K

Total Funding FY05: \$2,076K

Total Prior Year Funds (up to FY05): \$60,357K

Current Year Requirements

Year	Site Information		Expenditures	FY Total
FY06	ANAD-01	IRA	293.86	
	ANAD-01	RI	654.21	
	ANAD-01	RI	223.80	
	ANAD-02	LTM	15.00	
	ANAD-05	RAO	22.00	
	ANAD-07	LTM	5.00	
	ANAD-07	LTM	27.27	
	ANAD-08	RAO	22.00	
	ANAD-09	LTM	41.53	
	ANAD-09	LTM	600.00	
	ANAD-10	RAO	22.00	
	ANAD-11	RAO	22.00	
	ANAD-12	LTM	2.00	
	ANAD-13	LTM	5.00	
	ANAD-27	RAO	22.00	
	ANAD-29	LTM	2.00	
	ANAD-30	LTM	2.00	
	ANAD-31	IRA	92.14	
	ANAD-35	RAO	22.00	
	ANAD-46	RAO	32.00	
	ANAD-46	RAO	14.00	
	ANAD-48	RI	390.00	
	RAB/TAPP		37.00	\$2,568.80K

Total Funding FY06: \$2,569K

Total Future Requirements: \$25,383K

Total IR Program Costs (from inception to completion of the IRP): \$88,309K

Anniston Army Depot

Military Munitions Range Program

Total AEDB-R MMRP Sites/AEDB-R sites with Response Complete: 3/0

AEDB-R Site Types: Unexploded Ordinances (UXO), Discarded Military Munitions (DMM), and Munitions Constituents (MC).

Most Widespread Contaminants of Concern: Explosives, Metals

Media of Concern: Groundwater, Soil, Surface water, Sediments

Completed REM/IRA/RA: 0

Total MMRP Funding:

Prior years (up to FY05):	\$ 439,960
Current Year (FY06)	\$ 0
Future Requirements (FY07+)	\$ 5,286,000
	<u>\$ 5,725,960</u>

Duration of MMRP:

Year of MMRP Inception:	2002
Year of RA Completion:	2014
Year of MMRP Completion:	2047

MMRP Contamination Assessment

MMRP Contamination Assessment Overview

The Department of Defense's (DoD's) environmental cleanup activities began in 1975 under IRP before any formal federal requirements or program was established. DoD instituted its IRP to address past practices that often did not take long-term environmental effects into account. Environmental laws driving the present Defense Environmental Restoration Program (DERP) is CERCLA (1980), commonly known as the Superfund. The DERP was formally established by Section 211 of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and is codified in Sections 2710-2710 of Title 10 of the United States Code (USC). SARA set requirements for the DERP and its funding mechanisms, the Defense Environmental Restoration Account (DERA). DERA funding was available in 1984 before the formal establishment of the DERP.

MMRP Cleanup Exit Strategy

Currently there are three sites listed under the ANAD MMRP program. All three sites are scheduled to begin RI/FS in FY08. No off-post contamination associated with the sites in the MMRP has been reported, and no responses have been issued. No complicating factors or uncertainties have been identified.

2002

Closed, Transferred, or Transferring Range Inventory

Anniston Army Depot

Military Munitions Range Program

Site Descriptions

ANAD-001-R-01 RECOILESS RIFLE RANGE

SITE DESCRIPTION

The Recoilless Rifle Range is located in the northwest corner of the installation, and was used in the 1960s to test the recoil of the recoilless rifle. The site was closed in 1975 for reasons that are unknown. The current acreage of the Recoilless Rifle Range is 45 acres. The site has a 1200 meter firing fan that extends to the west that acts as a safety zone for materials fired from the rifle range. Although inert ordnance was used at the site during the recoilless rifle testing, the potential for live munitions exists, as it is located east of the current operational range used for target practice with 57 mm and 106 mm projectiles (the operational range was also used for small arms from 1981 to 1983). Access to the site is not limited once inside the installation's boundaries; however, its current location is at least two miles from any occupied buildings. No bulk propellants or explosives are used at the site.

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: Low Risk

CONTAMINANTS OF CONCERN:
MEC/MC

MEDIA OF CONCERN:
Soil, Groundwater

Phases	Start	End
PA.....	200203	200305
SI	200309	200508
RI/FS	200710	200809
RD	201210	201303
RA(C).....	201304	201409
LTM	201710	204709

RC: 201409

An SI gathered information to support that live ordnance may have been used. An RI has been recommended for this site.

CLEANUP STRATEGY

An RI/FS will be conducted at the site in FY08

ANAD-002-R-01
PISTOL RANGE

SITE DESCRIPTION

The Pistol Range was originally reported in the Phase 3 Army CTT Range Inventory. Review of the historical records indicated that this was an unofficial range used for a brief time period in the early 1980s. Munitions and Explosives of Concern (MEC) have not been detected. The Pistol Range was originally reported in the Phase 3 Army CTT Range Inventory. Review of the historical records indicated that this was an unofficial range used for a brief time period in the early 1980s. The potential presence of Munitions Constituents (MC) at the site suggests further confirmatory actions.

CLEANUP STRATEGY

An RI/FS will be conducted in FY08.

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: Negligible

CONTAMINANTS OF CONCERN:
MC

MEDIA OF CONCERN: Soil,
Groundwater

Phases	Start	End
PA	200203.....	200305
SI.....	200309.....	200508
RI/FS.....	200710.....	200909
RD.....	201210.....	201303
RA(C).....	201304.....	201409

RC: 201409

ANAD-003-R-01

BURNING GROUND BUFFER AREA

SITE DESCRIPTION

In the HRR, the Burning Ground Buffer Area was identified as a 351-acre site located in the northwestern section of the installation. The MMRP site encircles the operational Burning Ground from the current buffer area of 1,250 feet to the extent of the historic buffer zone of 2,400 feet.

CLEANUP STRATEGY

An RI/FS will be conducted in FY08.

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: Low

CONTAMINANTS OF CONCERN:
MEC/MC

MEDIA OF CONCERN:
Soil, Groundwater

Phases	Start	End
PA.....	200203	200305
SI.....	200309	200508
RI/FS	200710	200909
RD	201210	201303
RA(C).....	201304	201409

RC: 201409

Initiation of MMRP: 2002

Past Phase Completion Milestones

2003

- PA completed

2003

- SI at all MMRP sites completed in early FY06

Projected ROD/DD Approval Dates: None

Projected Construction Completion: None

Completion Date of all RA(C) Activities: 201409

Schedule for Five Year Reviews: None Scheduled

Estimated Completion Date of MMRP including LTM: 204709

ANNISTON ARMY DEPOT MMRP SCHEDULE

(Based on current funding constraints)

AEDB-R#	PHASE	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
ANAD-001-R-01	RI/FS									
	RD									
	RA(C)									
	LTM									204709
ANAD-002-R-01	RI/FS									
	RD									
	RA(C)									
ANAD-003-R-01	RI/FS									
	RD									
	RA(C)									

Prior Years Funds**Total Funding up to FY04: \$ 411,160**

Year	Site Information	Expenditures	FY Total
FY05	SI	\$28.8K	\$28.8K

Total Funding FY05: \$28,800***Current Year Requirements***

Year	Site Information	Expenditures	FY Total
FY06		\$0K	\$0.0K

Total Funding FY06: \$0K**Total Future Requirements: \$5,286,000****Total MMRP Program Cost (from inception to completion of the IRP): \$5,725,960**

The Technical Review Committee was converted into a Restoration Advisory Board (RAB) in May 1998. The RAB is made up of local officials, members of environmental groups and members of the local community. The RAB meets quarterly and discusses ongoing work in the Installation Restoration Program. The RAB has also played an active role in public meetings for the Comprehensive Groundwater RI, including the private well and spring inventory.

The RAB has been informed about the availability of the Technical Assistance for Public Participation (TAPP) program. The RAB is considering taking advantage of TAPP.